

tracum, more or less incrustated with iron oxide, and sculptured only by feeble incremental lines. Beaks inconspicuous, hinge as in the genus, bearing two very small diverging cardinals in one valve with a rather strong resilium between them which seems to carry a small lithodesma; opposite valve edentulous; pallial line entire; inner margins of the valves simple. Length 4.5; height 2.5; max. diameter 1.3 mm.

This species is proportionately much more elongate than any of the other Pacific coast species and can be recognized at once by its form. All of the others are more or less conspicuously equilateral, and nearly all are larger.

Habitat: with the preceding. The species is named in honor of its discoverer. Only one specimen of this and the preceding species has been seen. The present specimen within the valves had a large number of minute smooth larval bivalves, but whether they belong to the same species is uncertain, since the specimen did not contain any of the fleshy portions of the animal.

NOTES ON ANODONTA COUPERIANA AND A. GIBBOSA.

BY L. S. FRIERSON.

In the "Synopsis of the Naiades" of Mr. C. T. Simpson (1900), it is stated that the *Anodonta couperiana* Lea (with its variety *A. dunlapiana*), is a synonym of the *Anodonta gibbosa* Say. In this statement Mr. Simpson is followed by nearly all students who have handled the subject, rendering a difficult study still more confused. These species are quite distinct and belong to separate groups, and even possibly to *different genera*.

Anodonta couperiana is a fairly common species in most collections of any size. It is a handsome shell, with a bright, shining epidermis, and I am informed by Mr. T. Van Hyning that it very seldom cracks as other *Anodontas* are so prone to do. Its umbones are like those of *Anodonta imbecillis* Say, *i. e.*, they hardly rise above the hinge line. The corrugations are similar to the *imbecillis*, and some specimens verge towards the *Ano suborbiculata* of Say, which, despite its large size and different shape, belongs to the same group.

On the other hand, the *Ano. gibbosa* Say, is a rather rare shell and *generally misnamed*. It is remarkable for the great protuberance of its beaks and umbos, and the swelling of the umbos continues (with the growth of the shell) *downwards* and *backwards*. This peculiarity gained for the species its name. *A. gibbosa* belongs to the group of *cataracta* Say, having a double row of undulations on its beaks, and it is really very doubtfully distinct from this variable species.

Mr. Lea, having obtained specimens of this shell, in which the umbo to post-basal swelling was not very pronounced, he made a new species, which he called *A. dariensis*. The *gibbosa* being a rare shell, as such its identity has well-nigh been lost. For example, a *typical* specimen, so-called by the late G. W. Tryon, was labelled as *A. dariensis* by Mr. Simpson, and the *Anodonta dariensis* figured by Sowerby is a *gibbosa*. So also is the *gibbosa* figured by Sowerby (or Reeve) in plate XI, fig. 23. (This figure is not mentioned by Mr. Simpson). The shell is well figured also by Clessin, plate XVIII, figs. 3 and 4, under its proper name. Mr. Simpson refers these figures to *gibbosa* Say, correctly. But he also refers (as this species) to Sowerby's *couperiana*, and especially to Clessin, plate 50, figs. 3 and 4.

Evidently Mr. Simpson did not compare these figures with one another, for that Clessin's plate 50 figures 3 and 4, and plate 18, fig. 3 and 4 represent two entirely diverse species would be apparent to the veriest tyro. *Couperiana*, Lea (with *its variety donlapiana*) then is to be recognized as a good species, and *gibbosa*, Say is also a good species with *dariensis* as a synonym, or at best a variety.

POLYGYRA ALBOLABRIS ALLENI WETH., AND OTHER MISSOURI
HELICES.

BY F. A. SAMPSON.

Years ago when collecting shells at Eureka Springs, Arkansas, Charles C. Allen, then of that place, later of Florida, became interested in conchology, and a variety of *P. albolabris* found there was named for him by Prof. Wetherby, and it has since been decided that all of the *P. albolabris* west of the Mississippi and south of Iowa are of that variety.